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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/599,765	11/17/2006	Roger Stanley Bushby	081193-000000US	3893
20350 7590 05/25/2010 TOWNSEND AND TOWNSEND AND CREW, LLP TWO EMBARCADERO CENTER EIGHTH FLOOR SAN FRANCISCO, CA 94111-3834			EXAMINER LIN, KUANG Y	
			ART UNIT 1793	PAPER NUMBER
			MAIL DATE 05/25/2010	DELIVERY MODE PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/599,765	Applicant(s) BUSHBY, ROGER STANLEY	
	Examiner Kuang Y. Lin	Art Unit 1793	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 14 May 2010.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 19,21-24 and 31 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 19,21-24 and 31 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

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1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claims 19 and 21-24 are rejected under 35 U.S.C. 102(b) as being clearly anticipated by US 4,573,519 to Donomoto et al.

Donomoto et al. show a method for forming a metal matrix composite article. The method comprises a series of steps, the first step wherein a reinforcing material is set in a retaining tool 3 mainly composed of a water soluble salt with a high melting point, the second step wherein the reinforcing material set in the retaining tool is heated above certain temperature and then installed in a mold 5 which has cavity for receiving the retaining tool 3, the third step wherein molten matrix metal is contacted with and impregnated into the reinforcing material in the mold 5 and then solidified to form a metal base composite with the reinforcing material embedded therein, and the fourth step wherein the product (retaining tool 3 plus the composite article) is removed from the casting mold 5 with a knock-out plunger 6, and product is dipped in water to dissolve the retaining tool 3 away to obtain the metal matrix composite article (col. 2, lines 39-53 and col. 4, lines 21-27). The retaining tool 3 in which a reinforcing material is installed is subjected to heating, to prevent insufficient impregnation of the molten matrix metal into the pores of the preform of a reinforcing material due to premature solidification of the metal. Therefore, it is

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preferable to heat the retaining tool above the melting point of the matrix metal (col. 3, lines 12-18). The reinforcing material may be powder, flake or fiber including carbon fibers, silicon nitride fibers or ceramic whiskers (col. 3, lines 6-8). In one example, the molten aluminum alloy is preheated at 750 degree C. was quickly poured in the mold and a pressure of 1000 kg/cm² (980 bar) was applied by use of upper mold 51 (which is considered as a compaction piston) projected into the mold cavity. The interior of the casting mold 5 had been kept at 300 degree C. until the retainer 3 was installed in the mold (col. 4, lines 10-19).

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claim 31 is rejected under 35 U.S.C. 103(a) as being unpatentable over US 4,573,519 to Donomoto et al.

It would have been obvious to form the retaining tool 3 (inside mold) and outside mold 5 of Donomoto et al. with any configuration and removing the retaining tool 3 (inside mold) from the outside mold 5 with any manner as long as both molds do not interference with each other during process of separating of the retaining tool 3 (inside mold) from the outside mold 5.

5. Applicant's arguments filed May 14, 2010 have been fully considered but they are not persuasive in view of new ground of rejection.

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6. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Kuang Y. Lin whose telephone number is 571-272-1179. The examiner can normally be reached on Monday-Friday, 10:00-6:30,.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jessica L. Ward can be reached on 571-272-1223. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Kuang Y. Lin/
Primary Examiner, Art Unit 1793

5-20-10